a data regenerator, connected to the wavelength-multiplexing means, ~~for regenerating~~ said first predetermined number of data, ~~error~~ corrected by said first predetermined number of further ~~data~~ contained in said further optical signals using said second predetermined number of error correction bits contained in said further optical signals.

REMARKS

In accordance with the foregoing, amendments as to form but without change of substance are made in claims 1, 5 and 6 and new claims 21-29 are added, of which claims 21-27 are independent. Claims 21-23 are of the "means plus function" format permitted under 35 USC § 112, ¶ 6 and claims 24-26 are counterparts respectively of claims 21-23 but are not of the "means plus function" format.

No new matter is presented.

Approval and entry of the amended and new claims are respectfully requested.

ELECTION REQUIREMENT

The outstanding Action identifies Species 1 through 7 and relates these to various of Figs. 2-13.

It is respectfully submitted that the election requirement is defective, since ignoring certain figures corresponding to respective, different embodiments of the invention. More particularly, the Action overlooks the forth and fifth embodiments of the invention shown respectively in Figs. 8 and 9. This is especially critical in view of the fact that the fifth embodiment of Fig. 9 is addressed in claims 3, 11 and 12 -- and which applicants effectively are precluded from electing as the specie for prosecution herein, due to the Examiner's oversight.

Moreover, the new claims presented herewith are submitted to be generic; accordingly, applicants are entitled to examination of claims to a reasonable number of species and, in the present instance, to all of the disclosed species.

More particularly, claims 21, 24 and 27 are generic to an optical transmission system in accordance with the invention and claims 22 and 23, claims 25 and 26 and claims 28/27 and 29/27 are generic respectively to a transmitting-end optical transmission

means/device and a receiving-end optical transmission means/device.

Furthermore, independent claim 27 is generic to a system in accordance with the invention and to each of either a transmitting-end or a receiving-end device of such a system, respectively recited in claims 28/27 and 29/27, since generically characterizing the signal structure of a wavelength-multiplexed signal on a transmission line either as provided thereto by the transmitting-end device or as received by the receiving-end optical device.

As required under the rules, applicants nevertheless provisionally elect the first species corresponding to the first embodiment of the invention, Figs. 2-4, and list claims 1, 5, 6, and all of claims 21-29 as reading thereon.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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CERTIFICATE UNDER 37 CFR 1.8(a)

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By: _____

Date: _____

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please AMEND the following claims:

1. (ONCE AMENDED) An optical transmission system, comprising a transmitting-end optical transmission device, a receiving-end optical transmission device and an optical transmission line connecting the transmitting-end and receiving-end optical transmission devices,

the transmitting-end optical transmission device comprising:

encoding means, having n outputs, for forming k data by aligning phases of data on k channels with each other and for generating (n-k) error correction bits for said k data and adding said (n-k) error correction bits to said k data[;] , and

wavelength-multiplexing means, connected to the encoding means, for converting both said k data and said (n-k) error correction bits to n optical signals having different wavelengths and for wavelength-multiplexing said n optical signals so as to be delivered to the optical transmission line[,] ; and

the receiving-end optical transmission device comprising:

wavelength-demultiplexing means for separating the wavelength-multiplexed optical signals from the optical transmission line into n optical signals, each corresponding to one of the different wavelengths[;] , and

decoding means connected to the wavelength-multiplexing means, for generating k error corrected data by correcting error bits using the (n-k) error correction bits contained in said n separated optical signals.

5. (ONCE AMENDED) An optical transmission device, comprising:

encoding means, having k inputs, for forming n data by generating (n-k) error correction bits for k data corresponding to k channels and adding the (n-k) error correction bits to the k data;

phase alignment means for aligning phases of the n data received from the encoding means;

electrical-optical converting means for converting the n data, aligned in phase by the phase alignment means, to n optical signals having different wavelengths; and

wavelength-multiplexing means for multiplexing the n optical signals having the different wavelengths received from the electrical-optical converting means so as to form wavelength-multiplexed signals.

6. (ONCE AMENDED) An optical transmission device, comprising:

wavelength-demultiplexing means for separating wavelength-multiplexed optical signals having n wavelengths into n optical signals corresponding to the n wavelengths;

optical-electrical converting means, connected to the wavelength-demultiplexing means, for receiving and converting the separated n optical signals corresponding to the n wavelengths into n electrical signals; and

decoding means for performing [an] error correction decoding for k data, contained in the n electrical signals converted by the optical-electrical converting means, using (n-k) error correction bits contained in said n electrical signals.

Please ADD the following claims:

21. (NEW) An optical transmission system comprising a transmitting-end optical transmission device, a receiving-end optical transmission device and an optical transmission line connecting the transmitting-end and receiving-end optical transmission devices,

the transmitting-end optical transmission device comprising:

data generating means for aligning phases of a first predetermined number of data on a corresponding number of channels and for adding a second predetermined number of error correction bits to said first predetermined number of data, and

wavelength-multiplexing means, connected to the data generating means, for converting both said first predetermined number of data and said second predetermined number of error correction bits to optical signals having different wavelengths and for wavelength-multiplexing said optical signals so as to be delivered to the optical transmission line; and

the receiving-end optical transmission device comprising:

wavelength-demultiplexing means for separating the wavelength-multiplexed optical signals from the optical transmission line into further optical signals, each corresponding to one of the different wavelengths, and

data regenerating means, connected to the wavelength-multiplexing means, for generating said first predetermined number of data, error corrected by correcting said first predetermined number of further data contained in said further optical signals using said second predetermined number of error correction bits contained in said further optical signals.

22. (NEW) A transmitting-end optical transmission device in an optical transmission system comprising the transmitting-end optical transmission device, a receiving-end optical transmission device and an optical transmission line connecting the transmitting-end and receiving-end optical transmission devices, comprising:

data generating means for aligning phases of a first predetermined number of data on a corresponding number of channels and for adding a second predetermined number of error correction bits to said first predetermined number of data; and

wavelength-multiplexing means, connected to the data generating means, for converting both said first predetermined number of data and said second predetermined number of error correction bits to optical signals having different wavelengths and for wavelength-multiplexing said optical signals so as to be delivered to the optical transmission line.

23. (NEW) A receiving-end optical transmission device in an optical transmission system comprising a transmitting-end optical transmission device, the receiving-end optical transmission device and an optical transmission line connecting the transmitting-end and receiving-end optical transmission devices, comprising:

wavelength-demultiplexing means for separating the wavelength-multiplexed optical signals from the optical transmission line into further optical signals, each corresponding to one of the different wavelengths; and

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data regenerating means, connected to the wavelength-multiplexing means, for generating said first predetermined number of data, error corrected by correcting said first predetermined number of further data contained in said further optical signals using said second predetermined number of error correction bits contained in said further optical signals.

24. (NEW) An optical transmission system comprising a transmitting-end optical transmission device, a receiving-end optical transmission device and an optical transmission line connecting the transmitting-end and receiving-end optical transmission devices,

the transmitting-end optical transmission device comprising:

a data generator aligning phases of a first predetermined number of data on a corresponding number of channels and adding a second predetermined number of error correction bits to said first predetermined number of data, and

a wavelength-multiplexor, connected to the data generator, converting both said first predetermined number of data and said second predetermined number of error correction bits to optical signals having different wavelengths and wavelength-multiplexing said optical signals so as to be delivered to the optical transmission line; and

the receiving-end optical transmission device comprising:

a wavelength-demultiplexor separating the wavelength-multiplexed optical signals from the optical transmission line into further optical signals, each corresponding to one of the different wavelengths, and

a data regenerator, connected to the wavelength-multiplexing means, generating said first predetermined number of data, error corrected by said first predetermined number of further data contained in said further optical signals using said second predetermined number of error correction bits contained in said further optical signals.

25. (NEW) A transmitting-end optical transmission device in an optical transmission system comprising the transmitting-end optical transmission device, a receiving-end optical transmission device and an optical transmission line connecting the transmitting-end and receiving-end optical transmission devices, comprising:

a data generator aligning phases of a first predetermined number of data on a corresponding number of channels and adding a second predetermined number of error correction bits to said first predetermined number of data; and

a wavelength-multiplexor, connected to the data generator, converting both said first predetermined number of data and said second predetermined number of error correction bits

to optical signals having different wavelengths and wavelength-multiplexing said optical signals so as to be delivered to the optical transmission line.

26. (NEW) A receiving-end optical transmission device in an optical transmission system comprising a transmitting-end optical transmission device, the receiving-end optical transmission device and an optical transmission line connecting the transmitting-end and receiving-end optical transmission devices, comprising:

a wavelength-demultiplexor separating the wavelength-multiplexed optical signals from the optical transmission line into further optical signals, each corresponding to one of the different wavelengths; and

a data regenerator, connected to the wavelength-multiplexing means, for generating said first predetermined number of data, error corrected by said first predetermined number of further data contained in said further optical signals using said second predetermined number of error correction bits contained in said further optical signals.

27. (NEW) An optical transmission system wherein wavelength multiplexed optical signals are transmitted over an optical transmission line, as produced by a transmission-end device for such transmission, or, after such transmission, as received by a receiving-end device, wherein:

the transmitted wavelength multiplexed optical signals comprise a first predetermined number of data on a corresponding number of channels having added thereto a second predetermined number of error correction bits and both thereof converted to optical signals of respective, different wavelengths and which are wavelength-multiplexed for such transmission.

28. (NEW) An optical transmission system as recited in claim 24, wherein the transmission-end device comprises:

a data generator aligning phases of a first predetermined number of data on a corresponding number of channels and adding a second predetermined number of error correction bits to said first predetermined number of data; and

a wavelength-multiplexor, connected to the data generator, converting both said first

predetermined number of data and said second predetermined number of error correction bits to optical signals having different wavelengths and wavelength-multiplexing said optical signals so as to be delivered to the optical transmission line.

29. (NEW) An optical transmission system as recited in claim 24, wherein the transmission-end device comprises:

a wavelength-demultiplexor separating the wavelength-multiplexed optical signals from the optical transmission line into further optical signals, each corresponding to one of the different wavelengths; and

a data regenerator, connected to the wavelength-multiplexing means, for regenerating said first predetermined number of data, error corrected by said first predetermined number of further data contained in said further optical signals using said second predetermined number of error correction bits contained in said further optical signals.